

REMARKS

Introduction

Claims 1-24 are pending in this application, with claims 1, 7, 9, 15, 17, and 23 being in independent form. Claims 1-3, 9, 10, 15, and 17-22 have been amended to define still more clearly what Applicants regard as their invention; these changes have been made for the purposes of clarification only, and no change in scope of the claims is either intended or believed to be effected by the changes.

The objection to the specification

The Office Action objects to the arrangement of the specification for the reasons provided in paragraph 4. The specification has been amended herein to provide the preferred layout. It is submitted that no new matter has been added. Accordingly, withdrawal of this objection is respectfully requested.

The claim objections

Claims 18-22 were objected to for not reciting “A computer-readable medium storing a program.” These claims have been amended herein to make the changes suggested by the Examiner. Accordingly, withdrawal of this objection is respectfully requested.

The rejection under 35 U.S.C. § 112

The Office Action rejects claims 2, 3, 10, and 17-19 under 35 U.S.C. § 112, second paragraph, as being indefinite. The claims have been carefully reviewed and amended as deemed necessary to ensure that they conform fully to the requirements of Section 112, second paragraph, with special attention to the points raised in paragraph 7 of the Office Action. It is believed that the rejection under Section 112, second paragraph, has been obviated, and its withdrawal is therefore respectfully requested.

The rejections under 35 U.S.C. § 102/103

- Claims 1, 7, 9, 15, 17, and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. US 2003/0081595 to Nomura.
- Claims 2, 3, 5, 6, 10, 11, 13, 14, 18, 19, 21, and 22 were rejected under 35 U.S.C. § 103(a) as being obvious from Nomura in view of U.S. Patent Application Publication No. US 2003/0187746 to Kochanski.
- Claims 4, 12, and 20 were rejected under 35 U.S.C. § 103(a) as being obvious from Nomura in view of Kochanski and further in view of U.S. Patent No. 7,082,456 to Mani-Meitav.
- Claims 8, 16, and 24 were rejected under 35 U.S.C. § 103(a) as being obvious from Nomura in view of U.S. Patent Application Publication No. US 2002/0065035 to Koshino.

Applicants submit that independent claims 1, 7, 9, 15, 17, and 23, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

The present invention relates to a method for managing distribution requests for signals including content data. As described in the Background of the present application, distribution of signals including content data such as sounds and movies and the like has been heretofore performed in a network (e.g., a telecommunications network) such as the Internet. In order to distribute content, a signal including an instruction to request to distribute required content is transmitted from a processing device (for example, a computer) through a network to a computer, referred to as a content providing server, storing content data.

In the case of distributing content in a streaming format, the content providing server generally receives distribution requests from a plurality of processing devices. When the distribution requests increase, the load of distribution processing increases. When the load exceeds a predetermined volume, the content providing server cannot process all of the distribution requests. In addition, there is also a limit in the communications network to which the content providing server is connected. Data signal distribution cannot be performed beyond an allowable transmission rate.

The present invention is intended to ameliorate such problems.

Claim 1 is directed to a computer-implemented distribution request management method. The method includes setting a maximum number of distributable requests arbitrarily for requests from one communication network to one or plural content providing servers provided on another communication network, the requests being made for distribution of signals including content data. The method also includes sending the signal distribution requests to the content providing servers as long as a number of the requests is not larger than the maximum number.

By virtue of the features of claim 1, a distribution request management method can, for example, be provided in which the communication service providing side can perform data signal distribution while maintaining high reliability.

Nomura, as understood by Applicant, relates to a method and router for connecting a server and a client. The Examiner, at pages 6-7 of the Office Action, asserts that Nomura discloses "...setting a maximum number of distributable requests arbitrarily for requests (*set or change the maximum number of client connections to be connectable to the server* [0015]) from one communication network to one or plural content providing servers provided on another communication network.. " (Emphasis added.)

Paragraph 0015 of Nomura, cited by the Examiner, states as follows:

Another object of the present invention is to provide a router which can set or change the maximum number of client connections to be connectable to the server by remote control. (Emphasis added.)

However, as seen above, Nomura discusses setting or changing a maximum number of client connections to be connectable to the server. Nomura does not teach or suggest setting a maximum number of distributable requests, as recited in claim 1, the requests being made for distribution of signals including content data.

The Office Action further states at page 7 that Nomura discloses "...sending said requests sends said signal distribution requests to said contents providing servers as long as a number of said requests is within a range not larger than said maximum number ([0098])."

Paragraph 0098 of Nomura states as follows:

The number of clients being connected at present to the server (in the case of collecting the "present number of connections of application" for each IP address of the clients) or the "present number of connections of application" (in the case of collecting for each application) is respectively 59. Meanwhile, the "maximum number of connections of server" is 80. Therefore, it can be judged that the connection request from clients may be permitted. Here, it is assumed that an administrator of the label switch router 200 sets the "maximum number of connections of application" and "present number of connections of application" of FIG. 5 to any one of the number of clients or the number of applications. (Emphasis added.)

However, here Nomura discusses a connection request from clients and not a distributable request being made for distribution of signals including content data, as recited in claim 1.

Nothing in Nomura would teach or suggest setting a maximum number of distributable requests arbitrarily, as recited in claim 1, the requests being made for distribution of signals including content data, and sending the signal distribution requests to the content providing servers as long as a number of the requests is not larger than the maximum number, as recited in claim 1.

For at least the foregoing reasons, claim 1 is seen to be clearly allowable over Nomura.

Independent claims 9 and 17 recite features which are similar in many relevant respects to those discussed above in connection with claim 1. Accordingly, claims 9 and 17 are believed to be patentable for at least the same reasons as discussed above in connection with claim 1.

Claim 7 is directed to a computer-implemented distribution request management method, wherein when a request management means for managing requests which are made from one communication network to a content providing server provided on another communication network and for distribution of signals including data of contents in a streaming format concludes that a signal including data of a specific one of the contents requested by the signal distribution requests is a signal out of an arbitrarily defined bandwidth range, the request management means prevents distribution of the signal including data of the specific one of the contents.

The Examiner, at page 7 of the Office Action, asserts that Nomura discloses that when a request management means for managing requests “...concludes that a signal including data of a specific one of said contents requested by said signal distribution requests is a signal out of an arbitrarily defined bandwidth range, said request management means prevents distribution of said signal including data of said specific one of said contents...” The Examiner cites paragraph 0199 of Nomura and quotes therefrom.

Paragraph 0199 of Nomura states:

If the connection is judged to be impossible through the primary to tertiary judgments or if the LSP for bandwidth reservation cannot be connected on the MPLS network, the path setting unit 80A instructs the packet buffer 50 to cancel the relevant packet. Thereby, the packet including the connection request message stored in the packet buffer 50 can be cancelled. In this case, the path setting unit 80A may transmit the message for rejecting connection to the server to the client as the connection request source. (Emphasis added.)

However, as seen above, the cited portion of Nomura merely discusses instructing the packet buffer 50 to cancel the relevant packet if the connection is judged to be impossible or if the LSP for bandwidth reservation cannot be connected. In contrast, in the method of claim 7, the request management means prevents distribution of a signal including data of the

specific one of the contents when it is concluded that the signal including data of a specific one of the contents requested by the signal distribution requests is a signal out of an arbitrarily defined bandwidth range. Accordingly, the method of claim 7 prevents distribution of a signal based on an arbitrarily defined bandwidth range and not because distribution of the signal is necessarily “impossible” or “cannot” be performed.

Nothing in Nomura would teach or suggest a method wherein when a request management means for managing requests concludes that a signal including data of a specific one of the contents requested by the signal distribution requests is a signal out of an arbitrarily defined bandwidth range, the request management means prevents distribution of the signal including data of the specific one of the contents, as recited in claim 7.

For at least the foregoing reasons, claim 7 is seen to be clearly allowable over Nomura.

Independent claims 15 and 23 recite features which are similar in many relevant respects to those discussed above in connection with claim 7. Accordingly, claims 15 and 23 are believed to be patentable for at least the same reasons as discussed above in connection with claim 1.

The dependent claims

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Respectfully Submitted

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